

## REMARKS

Claims 1-15 are pending in the application.

Claim 1 is amended above to exclude steel as a housing composite material.

Claim 2 is amended above to require the outer housing to be a reinforced polymer material.

Claim 9 is amended above to convert it into independent form.

No new matter is added to the application by way of this claim amendment.

### I. THE ANTICIPATION REJECTION

The examiner rejected claims 1, 4-5, 7-8 and 13-15 for being anticipated by Brieger (USP 4,756,371). In particular, the examiner maintains that Brieger discloses the use of steel as a liner which the examiner alleges to be a composite material.

#### A. The Amended Claims Are Not Anticipated

While disagreeing with the examiner's characterization of steel as composite material, the Applicant, in an effort to place this application into an allowable condition, has amended claim 1 above to exclude steel as a composite material. As a result of this amendment, claims 1, 4-5, 7-8 and 13-15 are novel and patentable over Brieger.

Negative limitations are permissible in a claim so long as they do not create issues of indefiniteness and undue breadth and so that obviousness is avoided. The negative limitation added to claim 1 finds more than adequate support in the specification. In particular, the specification does not disclose any metal composite materials. Therefore, the specification clearly apprises one skilled in the art at the time of the invention that the composite materials used in the claimed carriers are not metals.

A similar negative limitation was determined by the Board of Patent Appeals to be supported by a specification even though the specification did not refer to the negative limitation. *ex Parte Parks*, 30 USPQ 2d 1234, 1236 (Bd. Pat. App. & Int'f. 1993). In *ex Parte Parks*, a claim was amended to include the negative limitation that a decomposition be conducted "in the absence of a catalyst". The Board concluded that even though there was no literal description of the negative limitations the specification still supported the negative limitation because (1) the specification nowhere mentioned the use of a catalyst; and (2) there was every opportunity to

discuss the uses of a catalyst in the specification. *Id.* at 1237. Just as in *ex Parte Parks*, the specification of the present application is completely silent about the use of metals as a composite material. Indeed if metals were used as the claimed composite material, it would be disclosed at the very minimum. Thus, as in *ex Parte Parks* the negative limitation added to claim 1 finds support in the specification and the examiner should withdraw the rejection of claims 13-20.

## **II. THE OBVIOUSNESS REJECTIONS**

The examiner rejected claims 2-3 for being obvious over Brieger in view of Xu et al. (USP 6,422,148). The examiner further rejected claims 6 and 10-12 for being obvious over Brieger in view of Yang (USP 6,520,258).

The examiner's obviousness rejections are moot at least virtue of claims 2-3, 6 and 9-12 being dependent upon claim 1 – which is patentable for at least the reasons recited in Section I above.

## **III. AMENDED CLAIM 2 IS PATENTABLE**

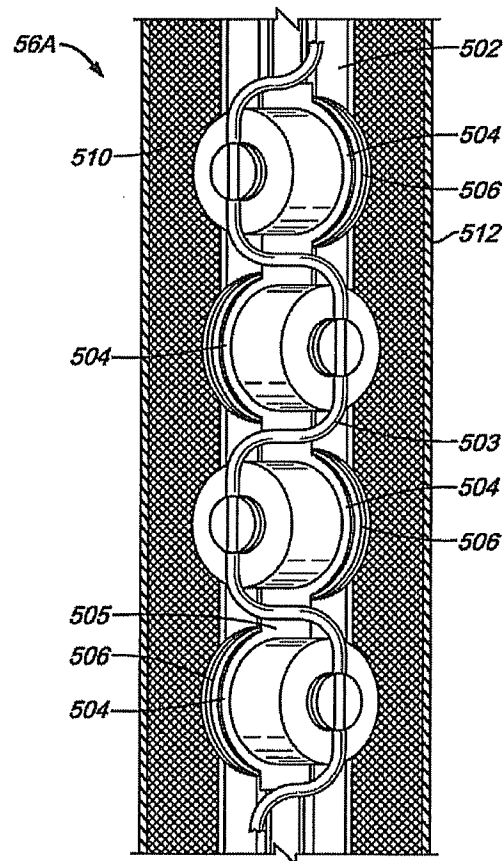
Claim 2 is amended above to require the housing to include an inner housing which is at least partially encompassed by an outer composite material overwrap in which the outer composite material is a reinforced polymer material. This claim is believed to be patentable because neither Brieger alone or in combination with Yang discloses or suggests such a housing structure. For at least this reason, claim 2 is independently patentable.

## **IV. INDEPENDENT CLAIM 9 IS PATENTABLE**

Claim 9 has been converted into independent form above. A feature of claim 9 that causes it to be patentable is the requirement that the housing be at least partially formed from a composite material that is a “loaded polymer matrix”. The examiner takes the position that this feature is disclosed by Yang. That is not the case.

Referring to Yang Figure 3A below, there is disclosed an encapsulant 510 that can be a composite material. However, the encapsulant 510 is not part of the housing. Instead, the encapsulant of Yang lies within sleeve 512 which corresponds to the claimed housing of this invention. The sleeve can be plastic – see col. 7, lines 10-13 of Yang – but nowhere is the Yang

sleeve disclosed as being a composite material. For at least this reason the combination of Brieger with Yang does not create a *prima facie* case of obviousness of amended claim 9.



### CONCLUSION

Claims 1-15 are believed to be ready for patenting for the reasons recited above. Favorable reconsideration and allowance of all pending application claims is, therefore, courteously solicited.

McDonnell Boehnen Hulbert & Berghoff LLP

Date: May 4, 2010

By: /A. Blair Hughes/  
A. Blair Hughes  
Reg. No. 32,901  
312-913-2123